

REMARKS

Claims 9, 10, 21, 22, 25 and 27 have been amended. Support for the changes made to the claims appears in the original disclosure, including page 22, line 19, and page 24, line 9 – page 25, line 3. Claims 9-12, 14-17 and 19-28 remain in the application. Applicants reserve the right to pursue the original and other claims in this and in other applications.

Claims 9, 10, 12, 14, 15, 17 and 19-22 are rejected under 35 U.S.C. § 102 as being anticipated by Thieme, and under 35 U.S.C. § 103 as being unpatentable over Thieme. Claims 9, 10, 12, 14, 15, 17 and 19-26 are rejected under § 103 as being unpatentable over Thieme in view of Wong and Dunand. Claims 27 and 28 are rejected under § 103 as being unpatentable over Thieme in view of Wong, Dunand and Tosmic. Reconsideration is respectfully requested.

An important aspect of the invention of claim 9 is that an intermediate layer is located between the metal base member and the cladding layer. The intermediate layer operates as a junction auxiliary material. It is electrically and mechanically unified and integrated metallurgically with the metal base member and the cladding layer in a unitary block. Thieme does not disclose or suggest the intermediate layer of claim 9.

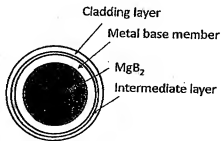


Illustration of Claimed Invention

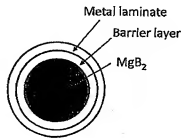


Illustration of Thieme Product

It appears from the Office Action, especially from page 5, fifth-line-from-bottom, and page 6, line 4, that the Examiner is of the view that Thieme discloses the intermediate layer of claim 9 – the intermediate layer that is provided between the recited cladding layer and metal base layer. Please consider, however, the following: Thieme ¶¶ 0014-0016 and 0018 refers to a product that has a central wire member, a second layer as a barrier layer with high resistivity, formed from Ta, Nb, Ni or the like, and a laminate layer, as a stabilizing layer, formed from Cu, Al or so. The wire is controlled to be thermally processed, which would occur at approximately 250° C. Please note that it would be impossible to form the Thieme product with metallurgical integration/unification at that temperature. The Thieme product is obtained via mechanical connection and pressure. Since the layers of the Thieme product are only mechanically connected to each other, it is not possible to resolve the problem described in Applicants' specification, page 24, lines 21-26, that is, the gap that is undesirably generated between materials.

In the Office Action, page 2, lines 8-13, the Examiner seems to determine that it is possible to obtain an arrangement recited in claim 9 by connecting layers of Cu and Fe, and also by thermally processing at 580-1220° C. It is not possible, however, to unify or integrate the layers metallurgically by such operations. That is, in order to unify the materials metallurgically, a junction auxiliary material should be used as an intermediate layer.

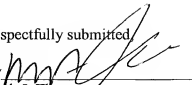
Claims 10-12, 14-17 and 19-28 depend from claim 9 or recite limitations similar to those discussed above in connection with claim 9. Claims 10-12, 14-17 and 19-28 should be allowable along with claim 9 and for other reasons.

Allowance of the application is solicited.

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Respectfully submitted

By


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